

Hip Fracture for the Family Doctor
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Clinical Presentation (AFP)

Usually presenting with pain and inability to walk after a fall.

- Injured leg is shortened, externally rotated, and abducted in the supine position

Crash course in imaging (Liebig, AFP)

1. PA pelvis, lateral femur
2. Can be subtle
3. Follow the curve
4. Compare both sides
5. Look at the angles
6. Get a CT, MRI or bone scan if in doubt

Crash course in surgical intervention by fracture type (Bader)

1. Femoral Neck
 - a. Nondisplaced- Percutaneous screw; touch-down weight bear (TDWB- actually less pressure across the hip)
 - b. Displaced
 - i. Elderly (“physiologically in their 70s”)- hemiarthroplasty, full weight bear, consider THR if OA present
 - ii. Middle-aged (55-65)- Requires decision between hemiarthroplasty and ORIF
 - iii. Young (less than 50)- Try to fix it (“save the hip”) with ORIF as the hemi will need to be replaced
2. Intertrochanteric: ORIF, TDWB
3. Subtrochanteric: ORIF, TDWB

Timing of surgical intervention (AFP, UTD)

Ideally within 24 to 48 hours of fracture, associated with decreased mortality at one year, lower incidence of pressure sores, decreased confusion and lower risk of fatal pulmonary embolism (PE).

- One in five will die within a year after hip fracture
- Of those who survive, only 50% can perform all routine ADLs and only 60% can walk without an aid
- Generally only want to delay if patient has an unstable issue such as CHF, unstable angina, sepsis, severe hypoxia, anemia, etc. Avoid waiting more than 72 hours.

VTE Prophylaxis (ACCP)

VTE risk is decreasing with modern therapies such as early mobilization and decreased length of stay, however risk remains high. Estimates are for nonfatal PE 1% and symptomatic DVT 1.8% off PPX and 0.35% and 1.8%, respectively, on PPX in the first 7-14 days (ACCP table 2, section 1.3.1)

- **Choice and timing: 2.3.2. In patients undergoing HFS, irrespective of the concomitant use of an IPCD or length of treatment, we suggest the use of LMWH in preference to the other agents we have recommended as alternatives: fondaparinux, LDUH, adjusted-dose VKA, or aspirin.**

Remarks: For patients in whom surgery is likely to be delayed, we suggest that LMWH be initiated during the time between hospital admission and surgery but suggest administering LMWH at least 12 h before surgery. Patients who place a high value on avoiding the inconvenience of daily injections with LMWH and a low value on the limitations of alternative agents are likely to choose an alternative agent. Limitations of alternative agents include the possibility of increased bleeding (which may occur with fondaparinux) or possible decreased efficacy (LDUH, VKA, aspirin, and IPCD alone). Furthermore, patients who place a high value on avoiding bleeding complications and a low value on its inconvenience are likely to choose an IPCD over the drug options.

- **2.4. For patients undergoing major orthopedic surgery, we suggest extending thromboprophylaxis in the outpatient period for up to 35 days from the day of surgery rather than for only 10 to 14 days (Grade 2B).**
- SCDs
- Major bleeding risk est 1.5% with LMWH, 1-2% with 'placebo'
- Bleeding RFs: severe renal failure, anti-PLT agent, previous major bleeding, surgical factors
- **Very slight benefit likely with LMWH v LDUH: symptomatic VTE 16/1000 v 13/1000**
- LDUH (AKA SQ Heparin) TID sta'ly but not sig'ly better than BID

Infection Prevention (UTD, AFP)

- **Prophylactic antibiotics:** Associated with decreased risk of deep and superficial wound infection, pneumonia and UTI. NTT = 20
 - Optimal timing less than two hours prior to surgery
 - Duration- long enough to provide concentrations for 24 hours
 - Choice of agent- major bug is staph
 - cefazolin 1-2 g IV q 8 hours
 - vancomycin 1 g IV q 12 hours if PCN and cephalosporin allergic
- **UTI prevention** with removing foley within 24 hours

Delirium Prevention (AFP, UTD)

May occur in up to 60% of patients after hip fracture; symptoms often persist for many months if not indefinitely.

- Avoid polypharmacy
- Remove physical restraints, urinary catheters
- Good nutrition and oxygenation
- Early mobilization
- Treat complications

- Environment
- Identify risk factors (benzos, alcohol withdrawal, e.g.)
- Treat agitation with low dose haloperidol 0.25-0.5 mg PO/IV q6, risperidone 0.25 to 0.5 mg orally BID or olanzapine 2.5 mg orally daily
- TREAT PAIN (see below)

Pain Management (AFP)

Untreated pain associated with increased risk delirium

- Benefits opiates outweigh the risks
- Morphine PCA, hydromorphone if renal failure
- Laxatives, stool softeners (Moosh and Push!)

Osteoporosis (Seton)

All patients with hip fracture should be evaluated with a DEXA and started on bisphosphonate “known to modify the subsequent risk of fracture at any site—eg, alendronate (Fosamax), risedronate (Actonel), or zoledronic acid (Reclast).”

- Optimal timing: start at 2-12 weeks

Prevention

- Rehabilitation- see algorithm from AFP article
- Vitamin D- 800, 1500, 2000 IU? (Heaney)
- Fall Prevention- vitamin D >800 IU plus calcium (Murad)
- NOF recommends: Calcium 1200-1500 mg daily; vitamin D 800-1000 IU and treat to target 25 – 30 in ‘at risk patients’

Reference:

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